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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,532	08/25/2003	Stephan Karl Barsun	200209610-1	4464

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EXAMINER

PAPE, ZACHARY

ART UNIT PAPER NUMBER

2835

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,532

Applicant(s)

BARSUN ET AL.

Examiner

Zachary M. Pape

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-20 is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- The following detailed action is in response to the correspondence filed 8/26/2005.
- Claims 1-13 are rejected. Claims 14-20 are allowed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Azar (US 6,301,779).

With respect to claim 1, Azar teaches the use of a heat dissipation device comprising: a base (700); and a plurality of fins (410, 420, 430, 440) connected to said base and extending out from said base at a non-orthogonal angle to said base, wherein said plurality of fins are substantially parallel.

With respect to claim 8, Azar further teaches the use of an electronic device comprising: a computer component (710); and a tilted fin heat sink (400) thermally coupled to said computer component (Via 700) for dissipating heat generated by said computer component, said tilted fin heat sink comprising a base (700) and a plurality of fins (410, 420, 430, 440), wherein said plurality of fins extend out from said base of said heat sink at a non-orthogonal angle to said base (As illustrated in Fig 7), and wherein

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said plurality of fins are substantially parallel, said tilted fin heat sink for dissipating heat generated by said computer component.

With respect to claims 2 and 9, Azar further teaches that the non-orthogonal angle is substantially forty-five degrees (As illustrated by alpha in Fig 3).

With respect to claim 3, Azar further teaches that the heat dissipation device is configured to be thermally coupled to an electronic component (710, Via 700) for dissipating heat generated by said electronic component (Base 700 must act as a thermal conductor to effectively transfer the heat from the heat generating unit (710) to the fins (400)).

With respect to claims 4, and 13, Azar further teaches that the electronic component (710) is an integrated circuit (Column 7, Lines 61-62; a microprocessor is inherently an integrated circuit).

With respect to claims 5, 6, 10, and 11, Azar further teaches that the heat dissipation apparatus (400) is comprised of aluminum or copper (Column 2, Lines 15-16).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azar in view of Fujisaki et al. (US 5,763,950).

With respect to claims 7 and 12, Azar teaches all the claim limitations of claim 1, but fails to teach the use of a fan. Fujisaki et al. teaches the use of a fan (35) arranged perpendicular to a plurality of angled fins (As illustrated in Fig 5) for moving the air across the fins (As illustrated in Fig 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the fan cooling features of Fujisaki et al. with the slanted fin cooling features of Azar to produce a more efficient means of cooling the angled fins (Fujisaki et al, Column 2, Lines 28-32).

Allowable Subject Matter

3. Claims 14-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The allowability resides in the overall structure of the device as recited in independent claim 14 and at least in part because claim 14 recites, "wherein said card connector and said electronic component are proximately placed such that said card extends out from said card connector and overlaps said fins, wherein said fins are at least partially between said circuit board and said card and wherein said card and said fins do not come in physical contact" (See applicants Fig 3 which illustrates the cards (415a, 415b) extending and overlapping the fins (425) – See Specification Page 9, Lines 17-27).

The aforementioned limitations in combination with all remaining limitations of claim 14 are believed to render said claim 14 and all claims dependent therefrom (15-20) patentable over the art of record.

Response to Arguments

4. Applicant's arguments concerning claims 1-13 filed 8/26/2005 have been fully considered but they are not persuasive.

With respect to applicants' remarks regarding claims 1,7,8 and 12 that the "fins of heat sink 400 are not all parallel, the examiner respectfully notes that the added limitations of claims 1 and 8 state, "where said plurality of fins are substantially parallel" and NOT that all the fins of the heat sink are parallel. As illustrated in Fig 4 of Azar, the fins (410, 420, 430, 440) are all substantially parallel.

With respect to applicants' remarks regarding claims 2 and 9 that the, "Applicants were unable to locate any reference to a forty-five degree angle anywhere in Azar", the examiner respectfully notes that claims 2 and 9 use the language, "substantially". Therefore as illustrated in Fig 4 of Azar the fins (410, 420, 430, 440) are substantially at an angle of 45 degrees.

In response to applicant's arguments against the references individually (See remarks page 10, 1st paragraph), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants' remarks regarding claims 14, 15-17, 19 and 20 have been fully considered and are persuasive in view of the newly added claim language, "said card extends out from said card connector and overlaps said fins".

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

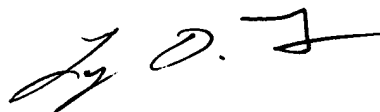
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZMP



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